## **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-002173 Address: 333 Burma Road **Date Inspected:** 20-Apr-2008

City: Oakland, CA 94607

**OSM Arrival Time:** 1300 **Project Name:** SAS Superstructure **OSM Departure Time:** 2200 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China

**CWI Name:** Wu Ming Kai / An Qing Xiang **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component:** Tower/OBG

## **Summary of Items Observed:**

Tower Shop and OBG

This Quality Assurance (QA) inspector arrived at ZPMC for observation of the SAS super structure fabrication and observed ZPMC welding in tower shop bay 2 where ZPMC CWI An Qing Xiang was observed monitoring the welding of skin plate splices using the Submerged Arc Welding (SAW) process for component number ESD1-SA216 A/K – 13 A. During this QA inspectors observation it was noted that ZPMC was using WPS-B-T-2221-B-U3c-S-1 with welding operator Xue Yian (040634). During this QA inspectors observation it was observed that ZPMC personnel was grinding the root pass in preparations for the next pass with SAW process no welding was observed at the noted time when this QA inspector was at this location. ZPMC was using thermal heating blankets for preheat and interpass temperatures and appeared to be within the tolerances of the above noted WPS.

### Floor Beams

This (QA) inspector continued his observation of the SAS super structure fabrication for bays 7 which ZPMC is in production for floor beams.. ZPMC's Certified Welding Inspector (CWI) Hu Wei Qing had 2 ZPMC Quality Control personnel performing various functions that included but not limited to, monitoring of welding parameters, preheat and interpass temperatures, and general progression of the welding process. Floor beams were being tack welded for flange plates under WPS-B-P-2211-B-U2.It was observed that ZPMC Welder Ren Jinzho (044837) was observed using the Shielded Metal Arc Welding (SMAW) process to tack the flange plates to the web plates for fit up. This was the only welding that was observed in bay 7 for this shift.

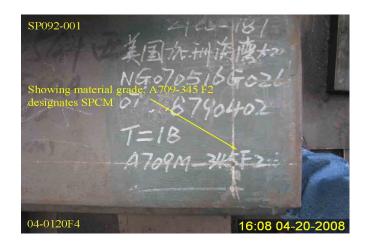
SP092-001-001~021

During the continued observations from this QA inspector it was observed that ZPMC was performing visual repairs for side plate SP092-001 using the SMAW process under WPS-345-SMAW-2G (2F)-FCM-Repair. There

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were approximately 20 areas that were repaired with the above noted process. ZPMC Certified Welding Inspector Wu Ming Kai was noted as being present with ZPMC Quality Control personnel monitoring the welding. This QA inspector asked the CWI for his documentation to verify the locations and was relayed to the QA inspector that they did not document the welding parameters for these repairs. It was told to this QA inspector by CWI Wu Ming Kai that he did not have to document these repairs. This QA inspector informed Mr. Kai that documentation was required for all welding especially weld repairs per the special provisions and ZPMC's WQCP. This QA inspector informed Wu Ming Kai that an incident report would be generated for this non-compliance.





## **Summary of Conversations:**

As noted within contents above.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Riley,Ken	Quality Assurance Inspector
Reviewed By:	Hager,Craig	QA Reviewer